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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,487	07/16/2003	Thomas Maier	MAIER T-2 US	3311

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EXAMINER	
SCHNIZER, HOLLY G	

ART UNIT	PAPER NUMBER
1656	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,487	MAIER, THOMAS	
	Examiner	Art Unit	
	Holly Schnizer	1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 9-25 is/are pending in the application.

4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 17-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

The Amendment and Response filed 7/19/05 has been entered and considered. Claims 1-8 have been cancelled and Claims 17-25 have been added. Therefore, Claims 9-25 are pending. Claims 9-16 are withdrawn as non-elected inventions. Claims 17-25 have been considered in this Office Action.

Priority

The instant application is granted the benefit of priority for the foreign application 102 32 930.3 filed in Germany on July 19, 2002. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) or (f), which papers have been placed of record in the file. Receipt is also acknowledged of the certified English translation of the German application submitted 7/28/05. Therefore, the earliest effective filing date considered in the instant office action is 7/19/02.

Objections Withdrawn

The objection to the Specification for improper use of trademarks is withdrawn in light of the amendment.

The objection of the Specification for a non-descriptive title is withdrawn in light of the amendment.

The objection of the abstract is withdrawn in light of the amendment.

Claim Objections Withdrawn

The objection to claim 4 is withdrawn in light of the cancellation of this claim.

Rejections Withdrawn

The rejection of Claims 1-5 under 35 U.S.C. 112, second paragraph as being indefinite because the term phosphoglycerate family or derivatives thereof is unclear is withdrawn in light of the cancellation of these claims and omission of these terms in the new claims.

The rejection of Claims 1-5 under 35 U.S.C. 112, second paragraph, as being indefinite because the recitation of "**a** gene product" as unclear because it suggests more than one gene product is withdrawn in light of the cancellation of these claims and omission of this phrase in the new claims.

The rejection of Claims 3 and 4 under 35 U.S.C., second paragraph, as being indefinite for the phrases "a copy number" (in claim 3) and "a promoter" (in claim 4) is withdrawn in light of the cancellation of these claims and omission of these phrases in the new claims.

The rejection of Claim 4 under 35 U.S.C. 112, second paragraph, as being indefinite for the phrase "selected from the group consisting of constitutive GAPDH promoter of the gapA gene, inducible lac, tac, trc, lambda, ara and tet promoters" is withdrawn in light of the cancellation of claim 4 and amendment of this phrase in the new claims.

The rejection of Claim 5 under 35 U.S.C. 112, second paragraph, as being indefinite as to the metes and bounds of "pACYC derivative" is withdrawn in light of the cancellation of Claim 5 and the omission of this phrase in the new claims.

Rejections Maintained

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection as it applies to the new claims is provided below followed by a response to Applicants arguments.

Rejection:

Claims 17-25 are rejected for the same reasons as provided for Claims 1-8 on page 7 in the Office Action mailed 2/17/05. The terms "yfiK homologue" as it appears in Claim 17, and the term "yfiK gene" as it appears in Claims 17, 21, 23, and 24 are unclear as to the metes and bounds they impart on the claimed subject matter. While the specification discloses how a "yfiK gene" may be **characterized**, and what may "be regarded as yfiK homologues" on pages 6-8 of the specification, explicit definitions for the terms "yfiK gene" and "yfiK homologue" are not provided. YfiK is an undefined acronym in the claims and has no well known meaning in the prior art. The function of

the yfiK gene product is not known, therefore, it is not clear what a yfiK gene is, what level of similarity must exist for a gene to be considered a yfiK gene or yfiK gene homologue. Claims 18-20, 22, and 25 are rejected since they depend from these indefinite claims yet do not correct their deficiencies.

Response to Arguments:

Applicants argue that yfiK gene is not an undefined acronym in the art as evidenced from the literature cited on page 6 of the Specification, that those of skill in the art have *postulated* as to a possible function of the yfiK gene and that homologues of the yfiK gene are defined on page 7, last paragraph of the Specification. These arguments have been considered but are not deemed persuasive for the following reasons. First, the Specification refers to a gene named yfiK found in the sequencing of the E. coli genome. However, there is no evidence for the function of the gene or its identification in other microorganisms. Thus, as stated in the previous Office action, it is not clear as to what level of similarity must exist for a gene to be considered a yfiK gene. Second, the specification at page 6, postulates that the gene product is an amino acid efflux protein but there is no evidence of record in the art or in the Specification that the yfiK gene product has this function. Lastly, page 7 of the Specification identifies yfiK homologues as those that are more than 30% identical but the Specification does not identify the sequence with which to make the comparison. Thus, the rejection is maintained.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The rejection as it applies to new claims 17-25 appears below followed by a response to Applicants arguments.

Rejection:

The Court of Appeals for the Federal Circuit has recently held that a "written description" of an invention involving a chemical genus, like a description of a chemical species, 'requires a precise definition, such as be structure, formula [or] chemical name,' of the claimed subject matter sufficient to distinguish it from other materials." University of California v. Eli Lilly and Co., 1997 U.S. App. LEXIS 18221, at *23, quoting Fiers v. Revel, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993)(bracketed material in original). To fully describe a genus of genetic material, which is a chemical compound, applicants must (1) fully describe at least one species of the claimed genus sufficient to represent said genus whereby a skilled artisan, in view of the prior art, could predict the structure of other species encompassed by the claimed genus and (2) identify the common characteristics of the claimed molecules, e.g., structure, physical and/or chemical

characteristics, functional characteristics when coupled with a known or disclosed correlation between function and structure, or a combination of these.

On pages 17-18 of the instant specification, an Escherichia coli strain (W3110) is described that has been transformed with vector pG13. pG13 is vector pACYC184-cysEX-GAPDH containing the E. coli yfiK gene (SEQ ID NO:1), which encodes the yfiK gene product (SEQ ID NO:2). The apparent function of this microorganisms and of the pG13 plasmid (disclosed on pages 5 and 19-23 of the specification) is to increase the fermentative production of N- and O-acetyl-serine and L-cysteine by increasing the amount of the yfiK gene product. The description of this one species of the yfiK gene product is adequate. However, the structure and function of a representative number of species of the claimed genus, as well as the common characteristics that define the structure of said genus, are not adequately described. Without adequate description of the correlation between structure and function, the structure and function of all yfiK gene products or homologues with increased activity in a microorganism strain and all plasmids containing a yfiK gene included in the scope of the claims cannot be predicted.

The limitation set forth in claims 24-25 that a plasmid containing a yfiK gene must additionally contain a genetic element for deregulation of cysteine metabolism also lacks adequate written description because the genus is not described by common characteristics. The single described species of the instant genera of plasmids, pG13, described above, contains cysEX, a genetic element for deregulation of cysteine metabolism; the structure and function of cysEX, as it appears in pACYC184 (it is mutated), is known in the art. However, the structure of a representative number of

species of the instant genus of plasmids with genetic elements for the deregulation of cysteine metabolism, as well as the common characteristics that define the structure of the instant genus, are not adequately described in the specification or the art.

One of skill in the art would be unable to predict the structure of other members of the instant genera of microorganism strains with increased expression of a yfiK-gene and plasmids containing the yfiK gene, optionally having a genetic element for deregulation of cysteine metabolism, by virtue of the instant disclosure. Therefore, the claims drawn to the instant genera of microorganism strains and plasmids are not adequately described.

Response to Arguments:

On page 21, of the response filed 7/19/05, Applicants argue that the amended claims do not recite a yfiK gene.

This argument has been considered but is not deemed persuasive because Claim 17 recites "an yfiK-gene" or "a gene of an yfiK homologue" in lines 5-6, Claim 21 recites "yfiK gene" in lines 2-3, Claim 23 recites "yfiK-gene" in lines 2-3, and Claim 24 recites "yfiK-gene" in line 1.

On page 21 of the response filed 7/19/05, Applicants argue that the yfiK gene as well as the yfiK gene product are known in the art.

This argument has been considered but is not deemed persuasive for the following reasons. As stated in the present Specification, a gene named yfiK has been sequenced from a single species, E. coli and a single sequence has been provided for this gene (SEQ ID NO:1). The specification admits that those of skill in the art at the

time of the invention did not know the function of the yfiK gene (p. 6, second paragraph). The present Specification proposes that the yfiK gene product contributes favorable to the production of amino acids of the phosphoglycerate family (page 7, first paragraph). However, the Specification does not provide any relationship between the function of the production of those amino acids and the gene sequence and there is no knowledge in the art or indicated in the Specification of a yfiK gene having a sequence other than that of SEQ ID NO:1 or one isolated from a source other than E. coli. Thus, one of skill in the art would not be able to predict what a yfiK gene would look like other than that of SEQ ID NO:1 which was isolated from E. coli. As stated in the previous Office Action, one of skill in the art would be unable to predict the structure of members of the instant genera of microorganism strains with increased expression of a yfiK gene other than that of SEQ ID NO:1 provided in the specification.

Applicants argue that yfiK-gene homologues are defined in the Specification on page 7 (last 2 sentences) and thus the written description rejection is overcome.

This argument has been considered but is not deemed persuasive. First, the last two sentences of page 7 of the specification indicate that a yfiK homologue is a gene whose sequence identity is more than 30% but do not clearly define the reference sequence to which the comparison is made. Second, the specification and the art do not provide any guidance regarding a relationship between structure and function. Therefore, one of skill in the art could not predict which of the sequences that are 30% identical to SEQ ID NO:1 (for example) are really yfiK genes (yfiK genes are considered

those that have the function of "contributing favorably to the production of amino acids of the phosphoglycerate family"). Thus, the rejection is maintained.

Claims 17-25 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a microorganism transformed with a yfik gene encoding SEQ ID NO:2 and a plasmid containing the cysteine metabolism gene cysEX and a yfiK gene encoding SEQ ID NO:2, does not reasonable provide enablement for the genera of a microorganism with increased expression of any yfiK-gene or a plasmid containing any yfiK gene and having any genetic element for deregulation of cysteine metabolism.

The rejection as it applies to new Claims 17-25 is provided below followed by a response to Applicants arguments.

Rejection:

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The ability to make microorganisms having increased yfiK-gene expression other than the yfiK-gene encoding SEQ ID NO:2 and plasmids other than those containing the yfiK-gene encoding SEQ ID NO:2 and the cysEX gene, which are included in the scope of the present claims, would require undue experimentation. Factors to be considered in determining whether undue experimentation is required, are summarized in In re Wands (858 F2d, 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)). These factors include (1) quantity of experimentation, (2) the amount of

direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

The instant specification teaches SEQ ID NO:1, a DNA encoding E. coli yfiK (SEQ ID NO:2), which has been subcloned into a plasmid containing the cysteine metabolism deregulation element cysEX, and transformed into E. coli. The specification fully enables a plasmid (or a microorganism containing a plasmid) encoding SEQ ID NO:2 and containing cysEX; however, the specification does not contain any examples of yfiK genes or homologues other than E. coli yfiK (SEQ ID NO:1) and no examples of a genetic element for the deregulation of cysteine metabolism other than cysEX. While the instant specification describes and enables means for identifying other yfiK genes and homologues based on sequence alignment, and the art describes and enables means for identifying cysteine metabolism deregulation elements other than cysEX, these methods do not enable one of skill in the art to make all, or a relevant portion of the yfiK genes or cysteine metabolism deregulation elements included within the scope of the claims. The ability to find a yfiK gene or a cysteine metabolism deregulation element is not equivalent to the ability to make a yfiK gene or a cysteine metabolism deregulation element as required by the statute (i.e., "make and use").

In addition, the nature of the invention is such that the genus of yfiK-gene sequences included in the scope of the claims must encode an active product (one that produces a microorganism strain that is suitable for fermentive production of o-acetyl-L-

serine, N-acetyl-L-serine, L-cysteine, LL-cysteine; however, guidance as to the structure-function relationship is not provided in the art or the specification. The yfiK gene sequences, included in the scope of the claims, which would provide a microorganism that produces o-acetyl-L-serine, N-acetyl-L-serine, L-cysteine, and/or LL-cysteine when the yfiK sequence expression is increased is highly unpredictable for the following reasons: the activity of the claimed genus of yfiK gene products and how that activity relates to the structure of the claimed genus is unknown. In conclusion, one of skill in the art would be unable to predict the structure of the members of the instant genera in order to make such members. Therefore, the instant claims are not enabled to the full extent of their scope.

Response to Applicants arguments:

Applicants argue that it is not necessary for a person skilled in the art to find other yfiK genes or to use other genetic elements for the deregulation of the cysteine metabolism as disclosed in the present application and that the now presented wording of the claims exactly covers the scope of the present invention (page 22-23 of response filed 7/19/05).

This argument has been considered but is not deemed persuasive because the instant claims are not enabled to the full extent of their scope for reasons cited above and in the previous Office Action. Specifically, the specification does not provide guidance for (and it is not well known in the art) microorganisms or plasmids containing yfiK gene sequences other than that encoding SEQ ID NO:2 as found in E. coli or for

cysteine metabolism deregulation elements other than cysEX. Therefore, the instant claims are not enabled to the full extent of their scope.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims, as written, do not sufficiently distinguish over microorganisms as they naturally exist because the claims do not particularly point out any non-naturally occurring differences between the claimed products and the naturally occurring products for the reasons cited on page 14-15 of the Office Action mailed 2/17/05. Applicants argue that the new claims, containing the phrase "genetically modified", should overcome the rejection. However, the specification does not contain a definition for "genetically modified" and this phrase could be interpreted to encompass any gene that is modified whether by hand of man or by nature. As stated in the previous Office action, natural gene duplication events can result in an increase in copy number of a gene and thus result in increased expression. In addition, naturally occurring mutations in a promoter or translation signal can be said to be "used" by a microorganism to increase yfiK gene expression. These natural modifications are encompassed by the phrase "genetically modified". Thus, it is not clear from the claims that the genetically modified microorganism strains having an increase in yfiK gene expression are only

those engineered in the laboratory. In the absence of the hand of man, the naturally occurring products are considered non-statutory subject matter. See Diamond v. Chakrabarty, 447 U.S. 303, 206, USPQ 193 (1980). The examiner again suggests amending the claims to indicate the hand of man, e.g. insertion of "transformed with the E. coli yfiK gene" as taught on pages 17-18 of the specification. See MPEP 2105.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

New Claims 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1 016 710 (Livshits et al., reference AM in IDS filed November 10, 2003).

A restatement of the rejection as it applies to the new claims is given below followed by a response to Applicants arguments.

Rejection:

Livshits et al. teach E. coli transformed with plasmid pYFIK, which is a multi-copy vector containing the E. coli yfiK gene, and methods of making said E. coli (page 7, [0053]. Livshits et al. also teaches either allowing multiple copies of the gene to exist on chromosomal DNA of the host or using promoters such as the lac, trc, and tac promoters, and the lambda phage promoters P_R and P_L to enhance expression of the

yfiK gene (page 4, paragraph [0022]-[0024]). The microorganism taught by Livshits et al., therefore, has increased activity of the yfiK gene (page 3, paragraph [0016]). Since the microorganisms has either a modified genome or a plasmid introduced therein, it is considered to be a genetically modified microorganism strain. Therefore, Livshits et al. meets the limitations of Claims 17-22.

Livshits et al. has anticipated claim 17 (and depending claims as discussed above) because in the broadest reasonable interpretation of the claims, the E. coli strain used by Livshits et al. is suitable for fermentive production of o-acetyl-L-serine, N-acetyl-L-serine, and L-cysteine, and is producible from a starting strain as required by Claim 17. The strain taught by Livshits et al. has been transformed with a vector, making producible from a starting strain. In addition, the E. coli strain taught by Livshits et al. is suitable for fermentative production of amino acids in the phosphoglycerate family (including those cited in the present claims) because E. coli bacteria have a biosynthetic pathway for amino acids of the phosphoglycerate family, as evidenced by Maier, who teach utilizing E. coli's biosynthetic pathway to produce amino acids of the phosphoglycerate family. Since the E. coli strain taught by Livshits et al. has not been modified to be auxotrophic for amino acids of the phosphoglycerate family, it does not require these amino acids to be supplied when it is grown, but makes them. Because the strain taught by Livshits et al. makes the amino acids of the phosphoglycerate family, it is suitable for fermentative production of these amino acids.

Response to Arguments:

Applicants argue that the E. coli strains of Livshits et al. are not suitable for fermentative production amino acids of the phosphoglycerate family. Applicants reference paragraph [0062] to support the argument that the data of Livshits et al. could not be used to predict the production of the amino acids recited in the present claims.

This argument has been considered but is not deemed persuasive for the following reasons. The claims recite a genetically modified microorganism having increased expression of a yfik gene or homologue. The claims recite an intended use of the claimed microorganism as suitable for the fermentive production of O-acetyl-L-serine, N-acetyl-L-serine, L-cysteine, and LL-cysteine. Livshits et al. discloses a microorganism containing a plasmid with the same gene (the yfik gene) as the present invention. Therefore, the microorganism of Livshits et al. is structurally identical to that of the claims and thus would have the same function. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim (see MPEP 2111.02). Moreover, "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) (as cited in MPEP 2112(I)). And, There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. Schering Corp. v. Geneva Pharm. Inc., 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003) (as cited in MPEP 2112(II). Thus, while Livshits et al. might not disclose the same properties of the

microorganisms as the present Specification does, the Livshits et al. microorganisms are identical to that of the claims and thus, absent evidence to the contrary, would have the same function.

Conclusion

No claims are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Schnizer whose telephone number is (571) 272-0958. The examiner can normally be reached on Tuesday-Thursday from 10 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr can be reached on (571) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Holly Schnizer
October 11, 2005

NASHAAT T. NASHED PHD.
PRIMARY EXAMINER